



Michigan Department of Transportation
2010 TRAC
Statewide Design and Build Bridge Challenge
Timeline

October 2009

1. Sign up as a Transportation and Civil Engineering (TRAC) School! Only schools involved in TRAC can enter the Michigan Department of Transportation (MDOT) Design and Build Bridge Challenge Competition, so call your TRAC Coordinator today. (http://www.michigan.gov/documents/mdot/Trac_246707_7.pdf)
2. Talk to students, teachers and engineering mentors about the Bridge Building Challenge. Groups of three students can enter on of three categories: 7th and 8th Grade Drawbridge, 9th and 10th Grade Floating Bridge, and 11th and 12th Grade Suspension Bridge.
 - a. Role of Students:
 - Actual creators of the bridge
 - Provide input through research and individual creativity
 - Agree on compromise when there is a disagreement
 - Have fun
 - b. Role of Teachers:
 - Organize the team within the school
 - Facilitate and advise
 - Maintain contact with the engineering mentor
 - Keep students on task
 - c. Role of Engineering Mentor:
 - Experienced person paired with student team
 - Provide input and teaching advice
 - Help with project planning
 - Establish deadlines and goals
 - Help with understanding of the rules
 - Let the students do the work

Download PowerDraft – This is the CAD software that **must** be used for your bridge-building plan. October and November are a great time to download the software and play with the program. Follow the directions for installing PowerDraft.

1. If you are not a CAD user, ask the CAD Teacher or Drafting Instructor within your school district to help with this software. If no one is available, contact your TRAC coordinator for a local resource.

Nov. 30, 2009

1. Send or Fax registration forms to MDOT for Statewide Contest on or before this date

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Dec. 11, 2009

1. Bridge-building kit sent from MDOT to participating school/team. The information and materials received will be based on the grades of the team members.

December 2009 – March 2010

1. There are three parts of the Bridge Contest:
 - a. Work on bridge design following guidelines in the bridge-building kit:
 - Study the rules
 - Plan the timing of the project
 - Research
 - b. Work on the construction of the bridge:
 - Safety and performance
 - Creativity of structural design
 - Quality of construction (use of materials)
 - Ease of operation
 - Snugness of fit at the supports
 - Originality
 - Finish enhancements
 - c. Work on oral PowerPoint presentation:
 - This is a seven to 10-minute explanation of the project, with penalties for being under or over this timeframe.
 - Points to Remember:
 - Keep a daily journal of your activities, including progress reports of day-to-day work on the project, dates, performance and comments from each team member. Also reference adults/teachers who helped - this will be part of your proposal.
 - Take lots of pictures throughout the entire process. This will be handy with your PowerPoint presentation.
 - Ask lots of questions!
 - Read all material carefully!

March 5, 2010

1. Proposals are due to MDOT-TRAC Program Manager in Lansing. Proposals must be post-marked by March 5, 2010, to be eligible for review. Do not send the bridge itself.

March 11, 2010

1. Schools will be notified if they are eligible to attend the Michigan Bridge Challenge. Reminder for the Michigan Design and Build Bridge Challenge, the bridge must be built by April 12, 2010, to participate in the Bridge Challenge

April 12, 2010

1. The Michigan Design and Build Bridge Challenge will be held at the Kellogg Center, Michigan State University, in East Lansing.